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# NOTICE OF ALLOWANCE AND FEE(S) DUE

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7590

12/29/2009

CONLEY ROSE, P.C. 5601 GRANITE PARKWAY, SUITE 750 PLANO, TX 75024 EXAMINER

WOOD, JR, STEVEN A

ART UNIT PAPER NUMBER

2462

DATE MAILED: 12/29/2009

APPLICATION NO.	PLICATION NO. FILING DATE FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,886	02/15/2008	Chenglong Liu	4202-02500	1547

TITLE OF INVENTION: METHOD FOR REAL-TIME SYNCHRONIZING CONFIGURATION DATA BETWEEN ELEMENT MANAGEMENT

SYSTEMS AND NETWORK ELEMENTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/29/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DU	Æ	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE		DATE DUE
nonprovisional	NO	\$1510	\$300		\$0		\$1810		03/29/2010
EXAM	INER	ART UNIT	CLASS-SUBCLASS						
WOOD, JR,	STEVEN A	2462	370-503000	)					
"Fee Address" ind PTO/SB/47; Rev 03-C Number is required.  3. ASSIGNEE NAME A PLEASE NOTE: Unl	ND RESIDENCE DATA less an assignee is identi h in 37 CFR 3.11. Comp	" Indication form ted. Use of a Customer A TO BE PRINTED ON tified below, no assigne	registered attorney	ngle or ag attorn be p type e pat an a	firm (having as a sent) and the name news or agents. If no rinted.	members of upon am	er a 2ee is 3eentified below, the de	ocument	has been filed for
			printed on the patent):						
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a. Applicant claim	tus (from status indicated s SMALL ENTITY statu d Publication Fee (if req records of the United Sta	us. See 37 CFR 1.27.	b. Applicant is no						
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10/586,886	02/15/2008	Chenglong Liu	4202-02500	1547		
30652 7.	30652 7590 12/29/2009		EXAM	INER		
CONLEY ROSE	C, P.C.		WOOD, JR, STEVEN A			
	ARKWAY, SUITE 75	0	ART UNIT	PAPER NUMBER		
PLANO, TX 75024			2462			
			DATE MAILED: 12/29/200	9		

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 91 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 91 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)
No.Co. of Allo of PP	10/586,886	LIU, CHENGLONG
Notice of Allowability	Examiner	Art Unit
	STEVEN WOOD	2462
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT ROTHER OF THE OFFICE OFF	(OR REMAINS) CLOSED in this a or other appropriate communication. IGHTS. This application is subject and MPEP 1308.	application. If not included on will be mailed in due course. <b>THIS</b> to withdrawal from issue at the initiative
1. This communication is responsive to <u>Applicant requested</u> 12/16/2009.	recosideration 08/20/2009 & autho	rized examiner's amendment
2. The allowed claim(s) is/are 1,3,4 and 8-22.		
<ul> <li>3.  Acknowledgment is made of a claim for foreign priority u <ul> <li>a)  All b)  Some* c)  None of the:</li> <li>1.  Certified copies of the priority documents have</li> <li>2.  Certified copies of the priority documents have</li> <li>3.  Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)).</li> <li>* Certified copies not received:</li> </ul> </li> <li>Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</li> </ul>	e been received. e been received in Application No. cuments have been received in the	s national stage application from the
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which giv		
5. CORRECTED DRAWINGS ( as "replacement sheets") must (a) including changes required by the Notice of Draftspers 1) hereto or 2) to Paper No./Mail Date  (b) including changes required by the attached Examiner' Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR 1) and sheet. Paplicament sheet(s) should be labeled as such in	son's Patent Drawing Review(PTo - 's Amendment / Comment or in the 1.84(c)) should be written on the draw	Office action of wings in the front (not the back) of
each sheet. Replacement sheet(s) should be labeled as such in the first of the sheet. Below and the deposit of the sheet sheet. Should be labeled as such in the sheet of the sheet sheet. Below a such in the sheet sheet sheet. Should be labeled as such in the sheet	osit of BIOLOGICAL MATERIAL	must be submitted. Note the
<ul> <li>Attachment(s)</li> <li>1. ☑ Notice of References Cited (PTO-892)</li> <li>2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)</li> <li>3. ☐ Information Disclosure Statements (PTO/SB/08),</li></ul>	5. ☐ Notice of Informal 6. ☐ Interview Summa Paper No./Mail D 7. ☒ Examiner's Amen 8. ☒ Examiner's Stater 9. ☐ Other	ry (PTO-413), Date
/Donald L Mills/ Primary Examiner, Art Unit 2462		

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### **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

This action is in response to the request for reconsideration of Patent Application No.
 10/586886, filed 08/20/2009. This action also responds to Applicant's authorization for Examiner's amendment, on 12/16/2009.

2. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Grant Rodolph (Reg No. 40,487) on 12/16/2009.

The application has been amended as follows:

#### Claims:

3. 1. (Currently Amended) A method for synchronizing configuration data between an Element Management System (EMS) and a Network Element (NE), wherein the configuration data of the NE is divided into a plurality of layers such that different layers comprise different configuration data sets of minimum units, and wherein a minimum unit identifier word is provided for each layer to identify any changes to the configuration data in the layer, the method comprising:

if the configuration data of the NE is changed, the NE changing the minimum unit identifier word of the layer corresponding to the changed configuration data;

the EMS obtaining the changed minimum unit identifier word from the NE; and the EMS comparing the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data; and

the EMS synchronizing the changed configuration data of corresponding NE with the EMS;

wherein the minimum unit identifier word comprises:

a sequence number identifier word that identifies a minimum configuration unit item with a sequence number;

a network management table identifier word that is a configuration word and comprises configuration tables of all the network management devices supported by the NE;

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a mixed identifier word;

or any combination thereof;

wherein the mixed identifier word comprises a configuration device identifier, a changing time identifier, a configuration item identifier, or any combination thereof.

4. 2. (Cancelled).

5. 3. (Previously Presented) The method, according to claim 1, wherein the layers comprise an NE configuration data layer, a service configuration data layer, and a table configuration data

layer; and

Wherein the NE configuration data layer represents the collection of all the data of the NE, the configuration data of the NE is divided into the service configuration data layer according to a service characteristic, and the table configuration data layer is determined on the basis of service characteristic classification.

4. (Original) The method according to claim 3, further comprising:dividing the configuration data in the table configuration data layer into row content

layers.

7. 5-7. (Cancelled).

8. (Previously Presented) The method according to claim 1, wherein the step of changing the minimum unit identifier word of the configuration data layer corresponding to the changed configuration data comprises:

determining which layer is associated with the changed configuration data; modifying the minimum unit identifier word of the layer associated with the changed configuration data and any higher layers.

9. (Previously Presented) The method according to claim 1, further comprising: determining which EMS has changed the configuration data of the NE; setting an operation user identifier word corresponding to the EMS that changed the configuration data;

the EMS obtaining the operation user identifier word from the NE; and
the EMS comparing the received operation user identifier word with the operation user
identifier word stored in the EMS to judge whether it is the EMS that has changed the
configuration data, and if not, executing the step of synchronizing the configuration data.

10. 10. (Previously Presented) The method according to claim 9, wherein the minimum unit identifier word assigned for each configuration data layer further comprises the operation user identifier word;

if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

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modifying the minimum unit identifier words of the layer associated with the changed configuration data and any higher layers; and

modifying the operation user identifier words comprised in the minimum unit identifier words.

- 11. 11. (Previously Presented) The method according to claim 1, wherein the NE is in communication with a plurality of EMSs, wherein the NE sends a configuration changed event notification to the EMSs, and wherein the configuration changed event notification comprises the changed minimum unit identifier word.
- 12. (Previously Presented) The method according to claim 11, wherein the step of the NE sending configuration changed event notification to the EMSs comprises:

the NE postponing sending the configuration changed event notification to the EMSs for a predefined period of time; and

if the configuration is changed again during the predefined time, the NE will not send the configuration changed event notification until at least one new change is finished.

13. (Previously Presented) The method according to claim 11, wherein the step of the NE sending the configuration changed event notification to the EMSs comprises:

if the NE continuously receives configuration commands from multiple different EMSs or a batch processing configuration commands from a single EMS, the NE will not send the

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configuration changed event notification to the EMSs until all the corresponding configurations are finished.

- 14. 14. (Previously Presented) The method according to claim 1, wherein the EMS actively queries the NE for the minimum unit identifier word.
- 15. 15. (Previously Presented) The method according to claim 1, wherein the EMS compares the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data, and wherein the configuration data changes comprises:

the EMS comparing the obtained minimum unit identifier word with the minimum unit identifier word stored in the EMS;

if the obtained minimum unit identifier word and the minimum unit identifier word stored in the EMS are not identical, determining that the configuration data of the layer corresponding to the minimum unit identifier word is changed, and the configuration data changes according to a change detail of the minimum unit identifier word.

16. (Currently Amended) The method according to claim 1, wherein the step of the EMS synchronizing the changed configuration data of the corresponding NE comprises:

the EMS comparing the changed configuration data with that stored in <u>a</u> history record of the EMS to determine the changes of the configuration data, and then synchronizing the configuration data according to the changes of the configuration data of the NE.

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17. (Previously Presented) The method according to claim 16, wherein the step of

synchronizing the configuration data by the EMS according to the changes of the configuration

data of the NE comprises:

the EMS synchronizing the configuration data at a specified time.

18. (Previously Presented) The method according to claim 16, wherein the step of

synchronizing the configuration data by the EMS according to the changes of the configuration

data of the NE comprises:

the EMS synchronizing the configuration data immediately in response to receiving the

changed minimum unit identifier word and an operation user identifier word.

19. (Previously Presented) The method according to claim 16, wherein the step of

synchronizing the configuration data by the EMS according to the changes of the configuration

data of the NE comprises:

after receiving the changed minimum unit identifier word and an operation user identifier

word, the EMS delaying a predefined period of time before synchronizing the configuration data.

20. (Previously Presented) The method according to claim 16, wherein the step of

synchronizing the configuration data by the EMS according to the changes of the configuration

data of the NE comprises:

setting a manual synchronization command;

and the EMS synchronizing the configuration data according to the manual synchronization command.

## 21. (Currently Amended) A method comprising:

determining whether a configuration data within a network element (NE) comprises a change, wherein the configuration data is divided into a plurality of layers, and wherein each layer is associated with one of a first plurality of words that each identify any changes to the associated layer;

determining which EMS has changed the configuration data of the NE;
setting an operation user identifier word corresponding to the EMS that changed the
configuration data, wherein the first words comprise the operation user identifier word;

if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

changing the first words associated with the layers that comprise the change when the configuration data comprises a change;

changing the operation user identifier words comprised in the first words; sending the first words but not the change to an Element Management System (EMS), wherein the EMS compares the first words to a plurality of second words and initiates a synchronization process when the first words do not match the second words wherein the EMS compares the first words to a plurality of second words to judge whether the EMS that has changed the configuration data, and if not, initiates a synchronization process.

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22. (Previously Presented) The method according to claim 1, wherein the minimum unit identifier word represents the changed configuration data but does not comprise the changed configuration data.

#### Allowable Subject Matter

- 23. Claims 17 19, 21 27, 30 32 are allowed.
- 24. This communication warrants No Examiner's Reason for Allowance, applicant's reply make evident the reasons for allowance, satisfying the "record as a whole" proviso of the rule 37 CFR 1.104(e). Specifically, the substance of applicant's arguments filed on 09/28/2009 are persuasive, as such the reasons for allowance are in all probability evident from the record and no statement is deemed necessary (see MPEP 1302.14).
- 25. Any comments Applicants considers necessary must be submitted no later than the payment of the Issue Fee and to avoid processing delays, should preferably accompany the Issue Fees. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance." In event of any post-allowance papers (e.g. IDS, 312 amendment, petition, etc.), Applicant is exhorted to mail papers to the Production Control branch in Publications or faxed to post-allowance papers correspondence branch at (703) 308-5864 to expedite issuing process or call PUB's Customer Service if any questions at (703) 305-8497.

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Conclusion

26. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven Wood whose telephone number is (571) 270-7318. The

examiner can normally be reached on Monday to Friday 8:00 AM to 4:00 PM.

If attempts to reach the above noted Examiner by telephone are unsuccessful, the

Examiner's supervisor, Seema Rao, can be reached at the following telephone number: (571)

272-3174.

The fax phone number for the organization where this application or proceeding is

assigned is 571-270-8318. Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more

information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

/S.W./

December 16, 2009

Steven A. Wood

Examiner

Art Unit 2462

/Donald L Mills/ Primary Examiner, Art Unit 2462